



015118-6SQ.ST25.txt  
SEQUENCE LISTING

<110> RAJAMOHAN, GOVINDAN  
DAHIYA, MONIKA  
PATHANIA, RANJANA  
DIKSHIT, KANAK LATA

<120> A method for oxygen regulated production of recombinant  
staphylokinase

<130> U 015118-6

<140> 10/814,850

<141> 2004-03-31

<150> US 60/459,439

<151> 2003-04-01

<160> 14

<170> PatentIn version 3.3

<210> 1

<211> 161

<212> DNA

<213> Artificial Sequence

<220>

<223> A nucleotide sequence of expression cassette OXY-1

<400> 1

gatcaagctt atcatcgata agcttacagg acgctggggtt aaaagtattt gagttttgat 60

gtggattaag ttttgagagg tcaataagat tataatatgt gatgcttcac aattctgatg 120

tatggcaaaa ccataataat gaacttaagg aagacctcat g 161

<210> 2

<211> 582

<212> DNA

<213> Artificial Sequence

<220>

<223> A modified staphylokinase SAK-2 gene

<220>

<221> CDS

<222> (16)..(408)

<220>

<221> misc\_feature

<222> (18)..(18)

<223> n is a, c, g, or t

<220>

<221> misc\_feature

<222> (24)..(24)

<223> n is a, c, g, or t

<400> 2

gaacttaagc atatg gcn gga gcn tat aaa aag ggc gat gac gcg agt tat 51

## 015118-6SQ.ST25.txt

Ala Gly Ala Tyr Lys Lys Gly Asp Asp Ala Ser Tyr  
1 5 10

ttt gaa cca aca ggc ccg tat ttg atg gta aat gtg act gga gtt gat Phe Glu Pro Thr Gly Pro Tyr Leu Met Val Asn Val Thr Gly Val Asp	99
ggt aaa gga aat gaa ttg cta tcc cct cat tat gtc gag ttt cct att Gly Lys Gly Asn Glu Leu Leu Ser Pro His Tyr Val Glu Phe Pro Ile	147
aaa cct ggg act aca ctt aca aaa gaa aaa att gaa tac tat gtc gaa Lys Pro Gly Thr Thr Leu Thr Lys Glu Lys Ile Glu Tyr Tyr Val Glu	195
tgg gca tta gat gcg aca gca tat aaa gag ttt aga gta gtt gaa tta Trp Ala Leu Asp Ala Thr Ala Tyr Lys Glu Phe Arg Val Val Glu Leu	243
gat cca agc gca aag atc gaa gtc act tat tat gat aag aat aag aaa Asp Pro Ser Ala Lys Ile Glu Val Thr Tyr Tyr Asp Lys Asn Lys Lys	291
aaa gaa gaa acg aag tct ttc cct ata aca gaa aaa ggt ttt gtt gtc Lys Glu Glu Thr Lys Ser Phe Pro Ile Thr Glu Lys Gly Phe Val Val	339
cca gat tta tca gag cat att aaa aac cct gga ttc aac tta att aca Pro Asp Leu Ser Glu His Ile Lys Asn Pro Gly Phe Asn Leu Ile Thr	387
aag gtt gtt ata gaa aag aaa taaaacaaaa tagttgttta ttatagaaag Lys Val Val Ile Glu Lys Lys	438
taatgtcttg attgaatatg tgtagtgaaa ttatctttca tcaaattctc attcatgcac	498
gaatggttct gccccaccta atcagatatt acgtgactta tggggagaaa tcagtttgga	558
taaaagtgga ggatccagta gccg	582

<210> 3  
<211> 131  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> A peptide sequence of modified staphylokinase SAK-2 gene

<400> 3

Ala Gly Ala Tyr Lys Lys Gly Asp Asp Ala Ser Tyr Phe Glu Pro Thr  
1 5 10 15

Gly Pro Tyr Leu Met Val Asn Val Thr Gly Val Asp Gly Lys Gly Asn  
20 25 30

Glu Leu Leu Ser Pro His Tyr Val Glu Phe Pro Ile Lys Pro Gly Thr  
35 40 45

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Thr Leu Thr Lys Glu Lys Ile Glu Tyr Tyr Val Glu Trp Ala Leu Asp  
50 55 60

Ala Thr Ala Tyr Lys Glu Phe Arg Val Val Glu Leu Asp Pro Ser Ala  
65 70 75 80

Lys Ile Glu Val Thr Tyr Tyr Asp Lys Asn Lys Lys Lys Glu Glu Thr  
85 90 95

Lys Ser Phe Pro Ile Thr Glu Lys Gly Phe Val Val Pro Asp Leu Ser  
100 105 110

Glu His Ile Lys Asn Pro Gly Phe Asn Leu Ile Thr Lys Val Val Ile  
115 120 125

Glu Lys Lys  
130

<210> 4  
<211> 37  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> A primer SAK-1 for amplification

<400> 4  
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37

<210> 5  
<211> 37  
<212> DNA  
<213> Artificial Sequence

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<223> An oligonucleotide primer SAK-2

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37

<210> 6  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> An oligonucleotide primer SAK-3

<400> 6  
gaacttaagg aagatataca tatgtcaagt tcattcgaca aagga

45

<210> 7  
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<212> DNA  
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<220>  
<223> An oligonucleotide primer SAK-4

<400> 7  
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<210> 8  
<211> 411  
<212> DNA  
<213> Staphylococcus aureus

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acaggcccgt atttgatggg aaatgtgact ggagttgatg gtaaaggaaa tgaattgcta 120  
tcccctcatt atgtcgagtt tcctattaaa cctgggacta cacttacaaa agaaaaaatt 180  
gaatactatg tcgaatgggc attagatgag acagcatata aagagtttag agtagttgaa 240  
ttagatccaa gcgcaaagat cgaagtcact tattatgata agaataagaa aaaagaagaa 300  
acgaagtctt tccctataac agaaaaagggt tttgttggtc cagatttatc agagcatatt 360  
aaaaaccctg gattcaactt aattacaaag gttgttatag aaaagaaata a 411

<210> 9  
<211> 606  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> A staphylokinas SAK gene with primer and terminator sequences

<400> 9  
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gatgacgcga gttattttga accaacaggc ccgtatttga tggtaaagt gactggagtt 120  
gatggtaaag gaaatgaatt gctatcccct cattatgtcg agtttcctat taaacctggg 180  
actacactta caaaagaaaa aattgaatac tatgtcgaat gggcattaga tgcgacagca 240  
tataaagagt ttagagtagt tgaattagat ccaagcgcaa agatcgaagt cacttattat 300  
gataagaata agaaaaaaga agaaacgaag tctttcccta taacagaaaa aggttttggt 360  
gtcccagatt tatcagagca tattaaaaac cctggattca acttaattac aaaggttggt 420  
atagaaaaga aataaaacaa aatagttggt tattatagaa agtaatgtct tgattgaata 480  
tgtgtagtga aattatcttt catcaaattc tcattcatgc acgaatgggt ctgccccacc 540  
taatcagata ttacgtgact tatggggaga aatcagtttg gataaaagtg gaggatccag 600  
tagccg 606

<210> 10  
 <211> 377  
 <212> PRT  
 <213> Staphylococcus aureus

<400> 10

Ser Glu Arg Ser Glu Arg Ser Glu Arg Pro His Glu Ala Ser Pro Leu  
 1 5 10 15

Tyr Ser Gly Leu Tyr Leu Tyr Ser Thr His Arg Leu Tyr Ser Leu Tyr  
 20 25 30

Ser Gly Leu Tyr Ala Ser Pro Ala Ser Pro Ala Leu Ala Ser Glu Arg  
 35 40 45

Thr Tyr Arg Pro His Glu Gly Leu Pro Arg Thr His Arg Gly Leu Tyr  
 50 55 60

Pro Arg Thr Tyr Arg Leu Glu Met Glu Thr Val Ala Leu Ala Ser Asn  
 65 70 75 80

Val Ala Leu Thr His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Gly  
 85 90 95

Leu Tyr Leu Tyr Ser Gly Leu Tyr Ala Ser Asn Gly Leu Leu Glu Leu  
 100 105 110

Glu Ser Glu Arg Pro Arg His Ile Ser Thr Tyr Arg Val Ala Leu Gly  
 115 120 125

Leu Pro His Glu Pro Arg Ile Leu Glu Leu Tyr Ser Pro Arg Gly Leu  
 130 135 140

Tyr Thr His Arg Thr His Arg Leu Glu Thr His Arg Leu Tyr Ser Gly  
 145 150 155 160

Leu Leu Tyr Ser Ile Leu Glu Gly Leu Thr Tyr Arg Thr Tyr Arg Val  
 165 170 175

Ala Leu Gly Leu Thr Arg Pro Ala Leu Ala Leu Glu Ala Ser Pro Ala  
 180 185 190

Leu Ala Thr His Arg Ala Leu Ala Thr Tyr Arg Leu Tyr Ser Gly Leu  
 195 200 205

Pro His Glu Ala Arg Gly Val Ala Leu Val Ala Leu Gly Leu Leu Glu  
 210 215 220

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Ala Leu Ala Pro Arg Ser Glu Arg Ala Leu Ala Leu Tyr Ser Ile Leu  
225 230 235 240

Glu Gly Leu Val Ala Leu Thr His Arg Thr Tyr Arg Thr Tyr Arg Ala  
245 250 255

Ser Pro Leu Tyr Ser Ala Ser Asn Leu Tyr Ser Leu Tyr Ser Gly Leu  
260 265 270

Gly Leu Thr His Arg Thr His Arg Leu Tyr Ser Ser Glu Arg Pro His  
275 280 285

Glu Pro Arg Ile Leu Glu Thr His Arg Gly Leu Leu Tyr Ser Gly Leu  
290 295 300

Tyr Pro His Glu Val Ala Leu Val Ala Leu Pro Arg Ala Ser Pro Leu  
305 310 315 320

Glu Ser Glu Arg Gly Leu His Ile Ser Ile Leu Glu Leu Tyr Ser Ala  
325 330 335

Ser Asn Pro Arg Gly Leu Tyr Pro His Glu Ala Ser Asn Leu Glu Ile  
340 345 350

Leu Glu Thr His Arg Leu Tyr Ser Val Ala Leu Val Ala Leu Ile Leu  
355 360 365

Glu Gly Leu Leu Tyr Ser Leu Tyr Ser  
370 375

<210> 11  
<211> 50  
<212> DNA  
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<220>  
<223> An oligonucleotide PEC-1 for protein expression cassette

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<210> 12  
<211> 55  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> An oligonucleotide PEC-2 for preparing protein expression cassette

<400> 12  
atcttattga cctctcaaaa cttaatccac atcaaaactc aaatactttt aaccc

55

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<210> 13  
<211> 55  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> An oligonucleotide PEC-3 for preparing protein expression cassette

<400> 13  
agagggtcaat aagattataa tatgtgatgc ttcacaattc tgatgtatgg caaaa 55

<210> 14  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> An oligonucleotide PEC-4 for preparing protein expression cassette

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atgaggtcctt ccttaagttc attattatgg ttttgccata catcagaatt 50